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CENTRAL INTELLIGENCE AGENCY

REPORT

INFORMATION REPORT

COUNTRY USSR

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SUBJECT Type "B-2" (Cyrillic) Internal
Combustion Engines

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1. In V T Tavetkov's book "Dvigateli Vnutrennego Sgoraniya", on pages 372 and 373, illustrations 427-a and 427-b a cross cut and power plan of the internal combustion engine Type "B-2" 4 Comment: All alphabetical designations in this report are in Cyrillic letters/ are shown.
2. Engine "B-2" is a 4-cycle tank engine with 12 cylinders. The power of the engine is 300 HP and it makes 1500 revolutions per minute. Cylinder diameter is 150 mm and piston stroke 180 mm.
3. On the principle of this engine, marine engine Type "3A-6" was designed in the second half of 1947. This engine develops 150 HP with 1500 revolutions per minute. Cylinder diameter is 150 mm and piston stroke 180 mm. In this engine one entire "B-2" engine cylinder block was used.
4. The upper and lower part of the crankcase, the cylinder block and the head of the "3A-6" engine are finished in aluminum. Cylinder sleeves are detachable. The pistons, made of stamped dur-aluminum, are noted for great stability and little weight. The crankshaft is semi-supporting. The fly-wheel bracing is flanged. Connecting rods are double-teeth with a split of the lower head. Crankshaft-bearings, crank as well as connecting rod-bearings, have steel bushings, covered with a thin coating of lead-bronze, which provides for long and reliable operation of the engine without undue wear and tear on the bearings as well as on the crankshaft.
5. Gas distribution is made by two inlet and two outlet valves in each cylinder, which are set in motion by two distributor shafts. The distributor shafts are situated on top. Drive from the crankshaft is over small slanted and vertical shafts assisted by conical pistons. At the present time fuel injection is made by pump-jets.
6. The engine is equipped with an all-performance regulator which makes it possible to adapt the engine to conditions where varying speed performances

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are demanded. The oil-pump of the engine is pinion-driven; the water pump is centrifugal. The drive of fuel and water-pumps is by pinions, from the crankshaft.

7. The engine is equipped with a double starting system. The principal start is by the electro-starter which is attached to the engine crankcase. In case of non-functioning of the electro-starter system, an air-starter has also been provided.
8. The average effective pressure of the engine is $P_e = 4.82 \text{ kg/cm}^2$; length of engine is 2.4 meters; height of engine is 1.2 meters. Motor resource of engine is set at 1500 hours. For fuel Diesel auto-tractor fuel according to "ГОСТ 305-42" is suitable.
9. The "Д-6" engine is in use on small maritime vessels, (launches, small tug-boats), but is also used as an auxiliary engine.
10. This engine is very popular on river transport vessels and in the Fish Industry. In the river transport system particularly, a large number of motor vessels of the type "Моквиш", "ГТ" (dry-cargo motor-vessel), "ГТ" (tug-motor-vessel), "ГТ" (passenger motor-vessel) were put into operation during the last few years. All these motor-vessels are equipped with main engines type "Д-6".

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